Notice of Allowability	Application No.	Applicant(s)	
	10/039,005	JEON ET AL.	
	Examiner	Art Unit	
	Esaw T. Abraham	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the RCE filled on 06/27/05*.

2. ☒ The allowed claim(s) is/are *13-23*.

3. ☒ The drawings filed on *31 December 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

ALBERT DECADY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and or additions be acceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no latter than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Steven Laut on 08/03/05.

2. The application has been amended as follows:

As per claim 13:

Line, 7 change "branch metric calculating means" to ---branch metric calculation means--

Examiner's statement for reason for allowance

1. Claims **22 and 22** have been previously allowed.

2. Claims **13-20 and 23** have been allowed.

The following is an examiner's statement for allowance:

As per claim 13:

The prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious a log likelihood ratio calculator for calculating a log likelihood ratio result by receiving the forward state metric from said state metric calculation means and reading the reverse state metric saved at a memory in said state metric calculation means wherein the log likelihood ratio result L_k produced by computing a function (including the formula as in claim 13) by the log likelihood ratio calculator, wherein m is a state of a trellis diagram; k is a stage; s(m) is a

function a number complemented a Most Significant Bit (MSB) of binary number of m; (including the formula as in claim 13) input for a reverse state metric; forward state metric with state m and input 1; is a k^{th} reverse state metric with state s(m); A_k is a K^{th} forward state metric with state m and input 0 and B_k is a K^{th} reverse state metric with state m, and the log likelihood ratio is stored in a memory of the turbo decoder. Consequently, claim 13 is allowed over the prior art.

Claims **14-and 23,** which is/are directly or indirectly dependent/s of claim 13 are also allowable over the prior art of record.

As per claim 15:

The prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious a log likelihood ratio result by receiving the forward state metric from said state metric calculation means and reading the reverse state metric saved at a memory in said state metric calculation means wherein the log likelihood ratio result L_k produced by computing a function (including the formula as in claim 15) by a first calculator, wherein m is a state of a trellis diagram; k is a stage; s(m) is a function a number complemented a Most Significant Bit (MSB) of binary number of m; (including the formula as in claim 15) input for a reverse state metric; forward state metric with state m and input 1; is a k^{th} reverse state metric with state s(m); A_k is a K^{th} forward state metric with state m and input 0 and B_k is a K^{th} reverse state metric with state m. Consequently, claim 15 is allowed over the prior art.

Claims **16-19,** which is/are directly or indirectly dependent/s of claim 15 are also allowable over the prior art of record.

As per claim 20:

The prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious a log likelihood ratio result by receiving the forward state metric from said state metric calculation means and reading the reverse state metric saved at a memory in said state metric calculation means wherein the log likelihood ratio result L_k produced by computing a function (including the formula as in claim 20) by a first calculator, wherein m is a state of a trellis diagram; k is a stage; s(m) is a function a number complemented a Most Significant Bit (MSB) of binary number of m; (including the formula as in claim 20) input for a reverse state metric; forward state metric with state m and input 1; is a k^{th} reverse state metric with state s(m); A_k is a K^{th} forward state metric with state m and input 0 and B_k is a K^{th} reverse state metric with state m. Consequently, claim 20 is allowed over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone numbers for the organization where this application or proceeding is assigned (571) 273-8300.

Information regarding the status of an Application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Esaw Abraham

Art unit: 2133

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